



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Shelly et al. Attorney Docket No. BING-1-1020
Serial No.: 10/627,453 Group Art Unit: 3644
Filing Date: July 25, 2003 Examiner: Barefoot, Galen L.
Title: METHODS AND APPARATUS FOR ILLUMINATION OF REFUELING HOSES

DECLARATION OF INVENTOR MARK A. SHELLY REGARDING NON-OBVIOUSNESS

I, Mark A. Shelly, declare as follows:

1. I am one of the inventors of the subject matter described and claimed in the above-captioned patent application, and I am competent to testify to the facts stated herein.
2. I am an engineer employed by The Boeing Company, the assignee of the above-referenced patent application. I have worked in the field of aerial refueling technologies for approximately 19 years. I presently serve on the System Design panel of the Aerial Refueling System Advisory Group (ARSAG), an independent, technical, professional organization in existence for approximately two decades and dedicated to aerial refueling. Annually, ARSAG gathers representatives of the United States military services, U.S. Air Force, Navy, Marines, Army, Air Force Reserves and Air National Guard as well as Air Forces and Ministries of Defense of fourteen other nations, and along with airframe manufacturers, aerial refueling hardware manufacturers, study groups and aerospace consultants from around the world, to confer regarding aerial refueling.
3. In my experience, the subject matter of the pending claims, which include putting *an electroluminescent coating on the refueling hose*, is contrary to conventional wisdom with respect to putting an electrical charge on the outside of an aerial refueling hose, as exemplified



by U.S. Pat. No. 5,539,624 issued to Dougherty. I believe this is a non-obvious approach to illuminating an aerial refueling hose that has not been taught or suggested by the prior art.

4. I have reviewed the above-reference patent issued to Dougherty, as well as U.S. Pat. No. 4,644,895 issued to Cozad, and respectfully submit that they conflict with each other.

5. The Dougherty patent is owned by the hose manufacturing company Durodyne of Tucson Arizona. Durodyne hoses are on the majority of existing tanker aircraft, including Boeing's 767 tanker.

6. After the filing of the subject patent application, we held technical discussions with several interested parties, including Argo-Tech of Costa Mesa, California, and Durodyne. Argo-Tech started asking Boeing to license the subject matter taught by the above-referenced pending patent application, including the subject matter covered by the pending claims, starting in the Fall of 2003. In the time period between the Fall of 2003 and the present date, Argo-Tech has attempted to initiate licensing negotiations with Boeing on at least four different occasions. Most recently, Argo-Tech approached the undersigned to request to license the subject matter of the pending application as recently as July of 2005.

7. Similarly, one or more meetings have been held between representatives of Boeing and representatives of Durodyne to discuss the possibility of Boeing granting a license to practice the subject matter taught by the above-referenced pending patent application, including the subject matter covered by the pending claims. Relative to the marketing of aerial refueling hoses in Europe, Durodyne has expressed its desire to license this technology from Boeing and make this the lighted-hose technology standard for the industry. Durodyne further wants to develop this technology and demonstrate it at the annual Aerial Refueling System Advisory Group (ARSAG) meeting scheduled for April 2006 in San Diego, California.

8. Although these licensing negotiations between Boeing and Argo-Tech resulted in the preparation of a draft license agreement, these negotiations were terminated prior to the execution of a license agreement due to Boeing's participation in a presently-pending



competition for a large, multi-billion dollar contract to provide new aerial refueling tankers to the U.S. military.

9. At the present time, Boeing has decided to refrain from accepting any of the offers to license the subject matter covered by the claims of the pending patent application being made by the aerial refueling hose manufacturers in order to preserve its position with respect to these technologies in the competition for the above-referenced multi-billion dollar aerial refueling tanker contract. Boeing views the subject matter of the above-referenced patent application as being of significant strategic value in the above-referenced competition against its primary competitor (Airbus) for the multi-billion dollar aerial refueling tanker contract, with the outcome of many manufacturing and engineering jobs in the United States being determined by this competition.

10. For the foregoing reasons, I respectfully submit that the subject matter covered by the pending claims of the above-referenced patent application is not obvious in view of the prior art, and that a patent should be allowed.

I certify and declare under penalty of perjury of the laws of the United States that the foregoing is true and correct.

Dated this 3rd day of November, 2005 at Wichita, Kansas.



Mark A. Shelly